AQS Aspects of Exceptional Events Rule

Agenda

- Regulatory Requirements
- Present Air Quality System (AQS) Capabilities
- AQS Changes Required by New Rule
- Other Usability Improvements to Support Rule
- The Path Forward
- Q&A

Regulatory Requirements for AQS (1)

Part 50.14

- Support for initial event definition
- Support for flagging of data associated with causing a violation of a NAAQS
- Support for “concurrence” by the EPA with exclusion of flagged data from Design Values
- For PM: Exclusion of all data for days with concurred flags for specific NAAQS.
- Removal of flagging deadlines

Regulatory Requirements for AQS (2)

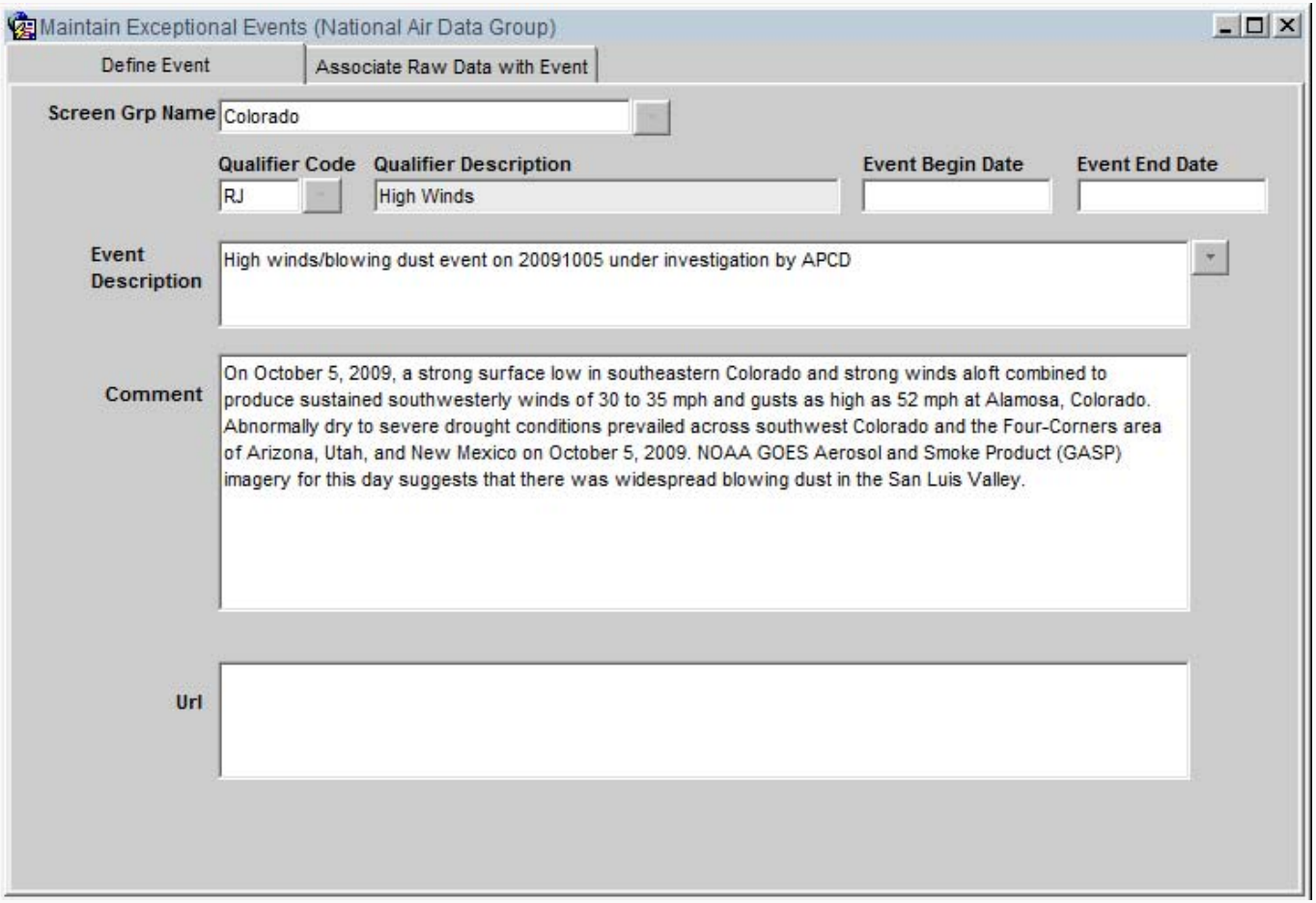
Rule Preamble:

- Support for unique name for event
- Support multiple events for single data point
- Support for additional metadata for event.
- Support for event geographic and temporal scope
- Support or State jurisdictional authority
- Support for association of multiple events with individual sample data measurement (Aggregation 1)
- Support for NAAQS violations caused by multiple events (Aggregation 2)

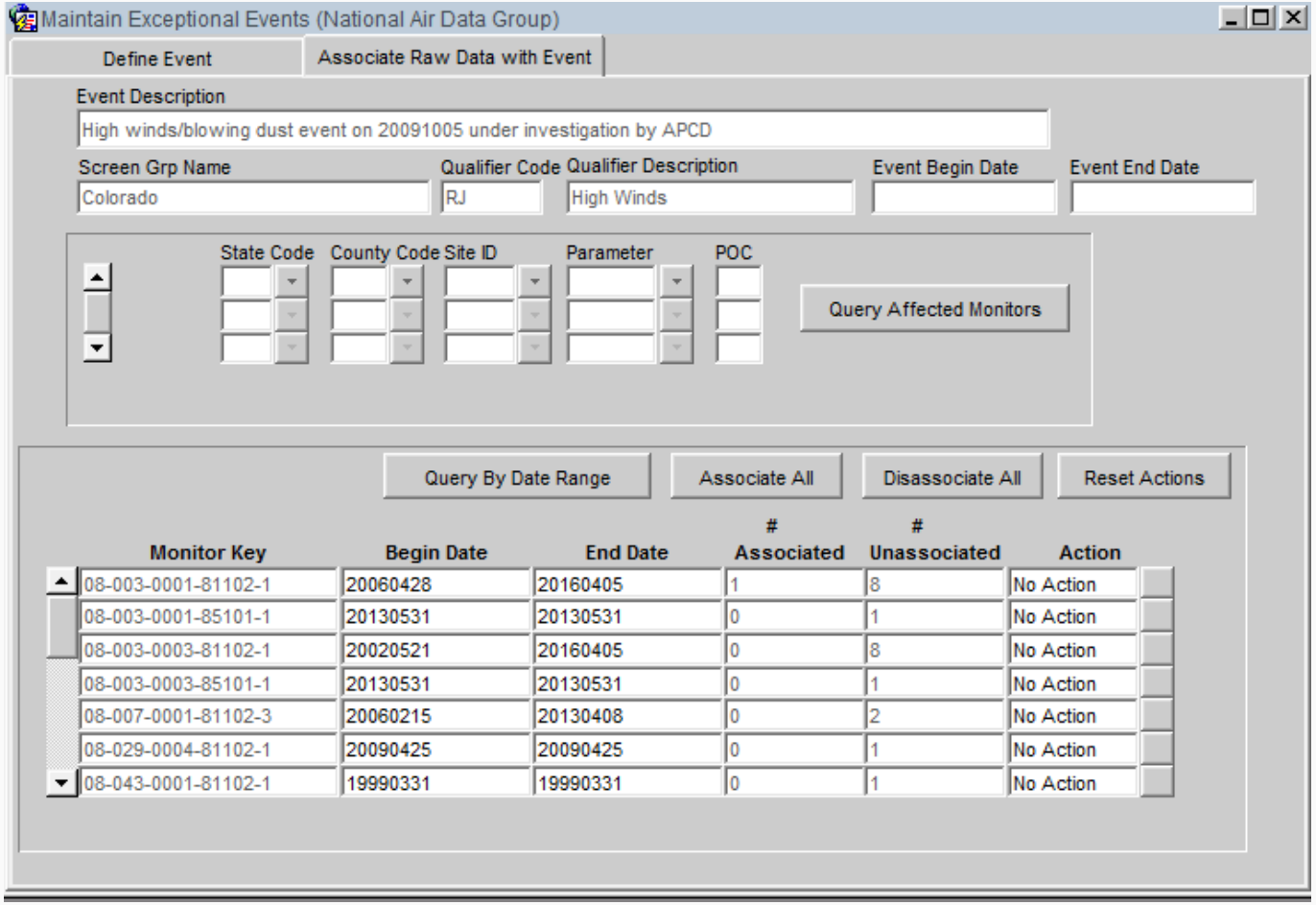
Present AQS Capabilities

- Creating event definitions by Screening Group
- Manual flagging sample measurements
- Associating flagged data with event definitions
- Reports of status of flagged data
- New requirements presently supported
  - Removal of flagging deadlines
  - Aggregation of multiple events per NAAQS Standard (Design Value Period)

Present Maintain Event Form



Present Event Association Form



Present Status Report

United States Environmental Protection Agency
Air Quality System
Raw Data Qualifier Report (v 1.1)

Report Date: May. 13, 2010

Parameter: PM2.5 - Local Conditions (88101)
Standard Units: Micrograms/cubic meter (LC) (105)

Monitor Key / Site Address	Sample Date-Time	Value	Qualifier Code	Qualifier Description	Action Date	NAAQS Standard	Concurrence Ind	Concurrence Date
37-147-0006-88101-1 403 Government Circle	2008-04-06 00:00		AN	Machine Malfunction				
37-147-0006-88101-1 403 Government Circle	2008-04-09 00:00		AN	Machine Malfunction				
37-147-0006-88101-1 403 Government Circle	2008-04-11 00:00	3.5	RC	Chem. Spills & Indust. Accidents		PM25 24-hour 2006 PM25 Annual 2006	Y N	2010-05-12 2010-05-12
	Event:			Test event for R. Coats	2010-05-12	Justification does not meet requirements		
	Comment/URL:			http://www.epa.gov				

Monitor Qualifier Counts: **RC** **Chem. Spills & Indust. Accidents** **Count: 1**
AN **Machine Malfunction** **Count: 2**

AQS Changes – Event Definition

- Event Metadata: Unique name, type (qualifier), description
- Geographic Scope
- Temporal Scope (begin & end dates, required)
- NAAQS Standards (optional at creation)
- Target Date for Demonstration(s)
  - Possibly NAAQS standard specific

AQS Required Changes (2)

- Support for Multiple Events associated with single measurement
- Particulate Matter: Flagging any hour for day will cause entire day to be flagged
- Support for Event Definition use by multiple Agencies (Screening Groups)
- Support for Associating event with affected Sites based on Geographic and Temporal scope
- Interactive (one-step) flagging of sets of data for Site-Parameter and time period

Other Possible Usability Improvements

- Create new “NAAQS Standard” in AQS only when Level or Form changes. (e.g. the 24-hour standard for PM2.5 did not change between the 2006 and 2013 NAAS Revisions)
- Automatic notification (via email) of State air program director and Regional EE contact when event definition associated with monitors in their jurisdiction
- Allow geographic scope of event to be time dependent
- Support for graphical display of concentration time-series for affected Site-Parameter with annotations for NAAQS level and event begin and end dates.
  - Indicate flagged data on time series graph
  - Allow interaction with time series graph to be used for data flagging and/or concurrence
- Allow Event-Affected data to be identified on other AQS outputs

The Path Forward

- The AQS Federal Team proposes creation of a workgroup of Regional and/or SLT stakeholders to help with usability issues. If you are interested in participating, please send and email to coats.robert@epa.gov.
- The AQS team will proceed with required changes that are transparent to users and will work with the workgroup to maximize usability
- Expect to implement most changes by end of Q1, 2017.

Questions?